

REMARKS

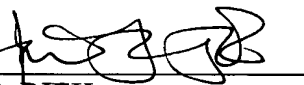
Claims 1-5 are presented in this application. The Title reflects the changes made during the International Phase of this application. Applicants have amended the specification for purposes of adding the priority information. Further, appropriate headings have been inserted on accordance to 37 CFR 1.77. Claim 1 has been amended to reflect US practice, and no change in claim scope is intended. Applicants have attached an Abstract on a separate sheet of paper as required by US practice. Amendments to the Abstract are made to comply with US practice.

It is respectfully submitted that the present application is in condition for allowance. An early consideration and Notice of Allowance are earnestly solicited.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge any fees or credit any overpayment, particularly including any fees required under 37 CFR Sect 1.16 or 1.17, and any necessary extension of time fees, to deposit Account No. 07-1392.

Respectfully submitted:

Dated: 9/14/2004

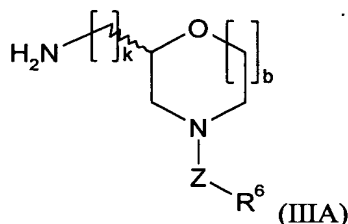
By: 
James P. RIEK
Attorney of Record
Reg. No 39,009
Tel. (919) 483-8022
Fax: (919) 483-7988

DT04 Rec'd PCT/PTO 28 SEP 2004

PROCESS FOR THE PREPARATION OF MORPHOLINE DERIVATIVES AND INTERMEDIATES THEREFORE

Abstract

Processes for the preparation of a compound of formula (IIIA)



or a salt thereof are disclosed. ;

wherein;

Z represents a bond, CO , SO_2 , $CR^{10}R^7(CH_2)_n$, $(CH_2)_nCR^{10}R^7$, $CHR^7(CH_2)_nO$, $CHR^7(CH_2)_nS$, $CHR^7(CH_2)_nOCO$, $CHR^7(CH_2)_nCO$, $COCHR^7(CH_2)_n$ or $SO_2CHR^7(CH_2)_n$;

R^6 represents C_{1-6} -alkyl, C_{2-6} -alkenyl, aryl, heteroaryl, aryl C_{2-6} -alkenyl, CN or a group of formula Y^2-J^2 ;

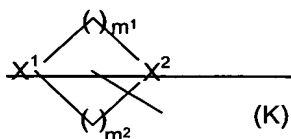
R^7 represents hydrogen, C_{1-4} -alkyl, $CONR^8R^9$ or $COOC_{1-6}$ -alkyl;

a and b represent 1 or 2, such that $a+b$ represents 2 or 3;

n represents an integer from 0 to 4;

M represents a C_{2-8} -cycloalkyl or C_{2-8} -cycloalkenyl group fused to a monocyclic aryl or monocyclic heteroaryl group;

J^2 represents a moiety of formula (K):



wherein X^+ represents oxygen, NR^{11} or sulphur, X^2 represents CH_2 , oxygen, NR^{12} or sulphur, m^1 represents an integer from 1 to 3 and m^2 represents an integer from 1 to 3, provided that m^1+m^2 is in the range from 3 to 5, also provided that when both X^+ and X^2 represent oxygen, NR^{11} , NR^{12} or sulphur, m^1 and m^2 must both not equal less than 2, wherein K is optionally substituted by one or more (eg. 1 or 2) Y^2 -aryl, Y^2 -heteroaryl, Y^2 -CO-aryl, COC_{2-8} -cycloalkyl, Y^2 -CO-heteroaryl, C_{1-6} -alkyl, Y^2 -COOC₁₋₆-alkyl, Y^2 -COC₁₋₆-alkyl, Y^2 -W, Y^2 -CO-W, Y^2 -NR¹⁵R¹⁶, Y^2 -

~~CONR¹⁵R¹⁶, hydroxy, oxo, Y²-SO₂NR¹⁵R¹⁶, Y²-SO₂C₁₋₆alkyl, Y²-SO₂aryl, Y²-SO₂heteroaryl,
Y²-NR¹³C₁₋₆alkyl, Y²-NR¹³SO₂C₁₋₆alkyl, Y²-NR¹³CONR¹⁵R¹⁶, Y²-NR¹³COOR¹⁴ or Y²-
OCONR¹⁵R¹⁶ groups, and is optionally fused to a monocyclic aryl or heteroaryl ring;~~

~~R⁸, R⁹, R¹⁰, R¹¹, R¹², R¹³ and R¹⁴ independently represent hydrogen or C₁₋₆alkyl;
R¹⁵ and R¹⁶ independently represent hydrogen or C₁₋₆alkyl or R¹⁵ and R¹⁶ together with
the nitrogen atom to which they are attached may form a morpholine, piperidine or pyrrolidine
ring;~~

~~R¹⁷ and R¹⁸ independently represent hydrogen or C₁₋₆alkyl;~~

~~W represents a saturated or unsaturated, non-aromatic 5-7 membered ring containing
between 1 and 3 heteroatoms selected from nitrogen, oxygen or sulphur, optionally substituted
with one or more C₁₋₆alkyl, halogen or hydroxy groups;~~

~~Y¹, Y² and Y³ independently represent a bond or a group of formula—
(CH₂)_pCR^eR^d(CH₂)_q—wherein R^e and R^d independently represent hydrogen or C₁₋₄alkyl or R^e and
R^d may together with the carbon atom to which they are attached form a C₂₋₈cycloalkyl group,
and p and q independently represent an integer from 0 to 5 wherein p + q is an integer from 0 to
5; and;~~

~~k is 1 or 2;
are disclosed.~~